

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Application Serial No.: 10/790,164

Art Unit: 3728

Applicant: Saunders N. Whittlesey

Examiner: PATTERSON, MARIE D

Filed: March 1, 2004

Confirmation No.: 9996

For: SHOE WITH SENSORS, CONTROLLER  
AND ACTIVE-RESPONSE ELEMENTS  
AND METHOD FOR USE THEREOF

Attorney Docket No.: S03-04

**DECLARATION OF DOUGLAS K. ROBINSON UNDER 37 C.F.R. § 1.131**

**Mail Stop Amendment**

Commissioner for Patents

PO Box 1450

Alexandria, VA 22313-1450

Sir:

I, Douglas K. Robinson, hereby declare that:

1. I am a U.S. citizen, and reside at 481 Fruit Street, Mansfield, MA 02048.
2. I am an inventor of the invention disclosed and claimed in the above-identified utility patent application.
3. I am, and at the time of the invention I was, employed by the ACUSHNET COMPANY, 333 Bridge Street, Fairhaven, Massachusetts 02719, the Assignee of record of the entire right, title and interest in the invention.
4. This declaration is filed to show that prior to March 10, 2003, I conceived the subject matter of the claimed invention and constructively reduced the invention to practice upon filing the above-identified patent application.

5. Attached hereto is Exhibit A. Exhibit A is a copy of the laboratory notebook pages demonstrating prior conception of the claimed invention. For example, the concept of the shoe claimed herein is described in the laboratory pages. Specifically, the pages detail the concept of a "smart shoe" that remains flexible when walking but senses torsional forces during a golf swing and stiffens the lateral midsole of the shoe for stability, where the shoe uses piezoelectric technology. Certain information has been redacted in accordance with standard practice. However, all redacted dates are prior to March 10, 2003.

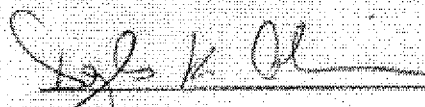
6. I have reviewed the document of Exhibit A. Although the dates of Exhibit A have been redacted, the dates are all prior to March 10, 2003.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Respectfully submitted,

Date: \_\_\_\_\_

Feb. 9, 2007

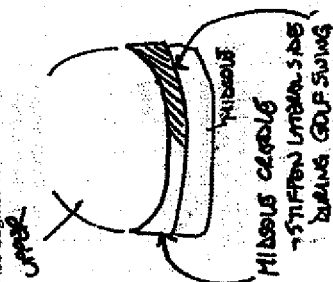
  
Douglas K. ROBINSON

Attachment

## Exhibit A

## Smooth Operators

Head first made tennis rackets to power up your serve. Now the sports equipment company wants to strengthen your slalom. Its All-Mountain skis contain microscopic fibers — originally used in Head's racket frames — and microchips that keep your blades steady regardless of terrain. With these skis, there's no telling where the powder ends and the ice begins. All-Mountain IC-300: \$750, [www.head.com](http://www.head.com).



### Fibers

Ceramic fibers laminated to the skis' titanium-alloy casing sense torsional forces — changes in pressure between the skis and the snow — as you pick up speed. The energy produced is sent to a processor.

### Processor

A microchip embedded under each binding captures the fibers' energy, increases it sevenfold, and then sends it back down the skis through their X-Frames.

### X-Frames

Two X-shaped frames — one in the wood-core and another in the casing — run the length of each blade. The frames stiffen on edges based on feedback from the processor, so the skis handle changing terrain with consistency.

## MICROCHIPS TURN BAD VIBES INTO A STEADY RIDE

by Sonia Zjawinski

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PROJECT NAME \_\_\_\_\_ NOTEBOOK NO. \_\_\_\_\_

U. MASS.

\*1 New Concept: GOLF SHOE THAT RESPONDS TO GOLFER'S SWINGING  
TO CREATE FIRMER LATERAL PLATFORM

USE PIEZOELECTRIC TECHNOLOGY

- LOW POWER USAGE

ADVANCED CERAMETRICS, INC.

MEETING WITH RICHARD "BOB" CASS, PRESIDENT AND FARHAD MOHAMMADI, Sr. Scientist  
AT ACI FACILITY IN LAMBERTVILLE, NJ (ALSO PRESENT DR. HAMMIL, SANDY WHITLOCK)

Advantages → NEED TO BE FITTED TO FIRM SURFACE FARTHER MOHAMMADI, Sr. Scientist

\* NEED TO DETERMINE VALUE (IN LBS) OF NEEDED FORCE AGAINST FOOT.  
WHERE

WE REVISITED OUR CONCEPT FOR A SMART GOLF SHOE THAT WOULD REMAIN  
SOFT AND FLEXIBLE WHEN WALKING BUT FIRMS UP ON THE LATERAL  
SIDE OF EACH SHOE DURING THE GOLF SWING.

ACI REVIEWED OTHER PRODUCTS, CURRENTLY IN HAND TENNIS RACKET AND  
SKI. THE PIEZOELECTRIC FIBER COMPOSITES OFFER STIFFENING  
PROPERTIES THAT ARE CONTROLLED BY ELECTRONICS.